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D a t e   f i l m e d

OBSCIS
OFFENDER-BASED STATE CORRECTIONS INFORMATION SYSTEM

VOLUME 4
OBSCIS IMPLEMENTATION PLAN

30448

SEARCH GROUP Inc.

OBSCIS
OFFENDER-BASED STATE CORRECTIONS INFORMATION SYSTEM

VOLUME 4
OBSCIS Implementation Plan

NCJRS

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ACQUISIT

FOREWORD

This volume is one of five that constitute the OBSCIS Report, a definitive work developed by the Offender-Based State Corrections Information System (OBSCIS) Committee. OBSCIS is a Project of SEARCH Group, Inc. (SGI). It has been funded by a grant from the Law Enforcement Assistance Administration (LEAA), U. S. Department of Justice.

The five volumes, their purposes, and their interrelationships are described below:

I. **THE OBSCIS APPROACH.** This is an overview description of the needs for corrections information reporting and how these needs can be met by the OBSCIS model and its accompanying tools. *This volume is prerequisite reading for all the others.*

II. **OBSCIS APPLICATION GUIDE.** This is a reference workbook that describes and provides system development selection criteria for 20 separate information processing applications, which can be incorporated into OBSCIS systems in individual states on a modular basis. This guide will be for structuring and developing the applications in each state's system.

III. **OBSCIS DATA DICTIONARY.** This volume contains descriptions, definitions, and suggested coding structures for the data elements used to establish the data base for an OBSCIS system. It will be used as a reference guide in the development of each state's data base.

IV. **OBSCIS IMPLEMENTATION PLAN.** This volume contains a detailed listing of a sequence of activities, tasks, and subtasks to be performed in the specification, design, and development of an OBSCIS system. This, in effect, is a reference guide describing the development methodology for establishing an OBSCIS system within any participating state.

V. **LAUNCHING OBSCIS — A COMPOSITE EXAMPLE.** This is a hypothetical example of how one imaginary state, named Composite, proceeds with the planning and analysis phases which initiate an OBSCIS project. The project is carried through the initial procedures for tailoring system specifications to the needs of a specific corrections authority.

NOTE: *Volume I in this series is prerequisite to all of the others. The remaining volumes are resource workbooks for the guidance of persons involved in the implementation of OBSCIS systems.*

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PREFACE

This book and its companion works are about cooperation. They result from cooperation. They are tools for implementing cooperation on a national scale between state and federal programs for the gathering and reporting of information on criminal offenders under the care of state corrections organizations nationally.

OBSCIS stands for Offender-Based State Corrections Information System. This name alone describes some of the uniqueness of the OBSCIS project. Creation of OBSCIS has been federally initiated and federally funded — through grants from the Law Enforcement Assistance Administration (LEAA) of the Department of Justice. Yet, in name and in fact, OBSCIS systems are state programs. An implemented OBSCIS system becomes a first-line management tool in each state corrections authority.

The approach is designed so that everyone associated with OBSCIS comes out a winner — the whole of the results should be greater than the sum of the parts. The underlying need at the national level is for a comprehensive criminal justice information system. To accomplish this, it is necessary to set in motion data gathering, processing, and reporting systems covering law enforcement agencies, the courts, and corrections authorities. OBSCIS represents the corrections segment of this total.

The logic for making OBSCIS happen is based on an approach of pragmatic cooperation: in order to report data so vitally needed at the national level, individual states will require information processing systems. Thus, the national program has opted to assist the states in funding and implementing these prerequisite systems.

The theory is relatively simple, straightforward. But making OBSCIS happen has been something else. Responsibility for developing OBSCIS has fallen to a group of representatives from 10 states selected for implementation of pilot systems, plus others serving on a voluntary basis.

Outwardly, the charge given to this Committee might seem relatively simple: to find information common denominators of the corrections process and to specify them for inclusion in state information and national reporting systems.

But anyone familiar with the workings of government will realize that the efforts required were both herculean and horrendous. Representatives on the Committee came from many separate and individually sovereign states as well as from a number of federal agencies.

More than a year of determined, dedicated effort — thousands of working days of toil — went into the development of the OBSCIS model described in this multi-volume report. Members of the OBSCIS Committee have constructed an important segment of the foundation of our future criminal justice information system. It is a pleasure to recognize them in the listing that follows.

OBSCIS is a project of SEARCH Group, Inc. It has been funded through a grant by LEAA. Steve E. Kolodney, Deputy Director of SEARCH Group, Inc., has been a primary force in keeping the work of the Committee moving and on track through publication of this document.

Thanks are due to the Management Services organization of Touche Ross & Co., who served as staff and technical mainstay for the work of the OBSCIS Committee. Their in-depth experience in the design and implementation of criminal justice information systems has been vital to the success of the OBSCIS Committee in developing the model and the accompanying guides and tools documented here.

Finally, thanks are due, in advance, for the dedicated efforts which will lead to implementation of OBSCIS systems in each separate and sovereign state.

Huntsville, Texas
May, 1975

Charles M. Friel, Ph.D.
Chairman, OBSCIS Committee

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Each state's corrections information system, implemented by using the OBSCIS model, will, necessarily, be unique. This is inevitable, since no two corrections agencies are the same. For this reason, the end product of the OBSCIS Committee's work was a *model* for a system rather than a *system* which would have had to enforce the impossibility of conformity among all states.

The philosophy of OBSCIS has been to seek a balance between this irreducible independence and some common denominators essential to the conduct of the business of a corrections agency. The model does this by establishing a Core Statistical System which includes the data elements required for national reporting and three basic applications necessary to gather, process, and report these data. In addition, several additional categories of data elements and applications beyond the core system have also been established as part of the model.

This implementation guide, then, is a tool to be used to create an OBSCIS system. Even though each state's Correction Information System (CIS) will be unique, there are underlying principles and methods which are common to the predictable development of an effective information system. "Predictability" is a key to the philosophy behind this systems development methodology. In order to predict, one must plan.

The computer age has been fraught with many significant systems development failures. Computerized and manual information systems have been billed as potential panaceas. But making them work has been another matter. The development of information systems is a detailed, highly technical process filled with uncertainties. The technical aspects of system development tend, too often, to dominate. Highly trained specialists become anxious to perform their technical design, development, and operating tasks.

The methodology incorporated in the OBSCIS Implementation Plan constitutes a proven technique for planning and managing the system development process. Under this approach, corrections managers set the standards. They specify what a system is to accomplish, and when. Provision is made to assure that requirements specified by corrections managers and by end users of information of the new systems will be met. This is done by establishing a working structure for coordination between information users and information processing technicians, and by structuring the project in a series of steps with built-in check and approval points.

The OBSCIS Implementation Plan is a tailored hybrid in systems development methodology. It incorporates both proven methods for development and implementation of computer and manual systems and special "front end" steps particularized to the needs of correctional agencies.

Additional materials related to these proven development methods are listed in the Bibliography in Volume 1, under the topic of "Corrections Management." The OBSCIS process presented in this volume is organized in the five distinct phases shown below. The first two phases of Project Plan-

Figure IV-1-1

OBSCIS Planning And Analysis Process
Project Planning
State Self-Analysis

OBSCIS Implementation Process
Correctional System Specifications
Technical Systems Design
Achieving Operational Status
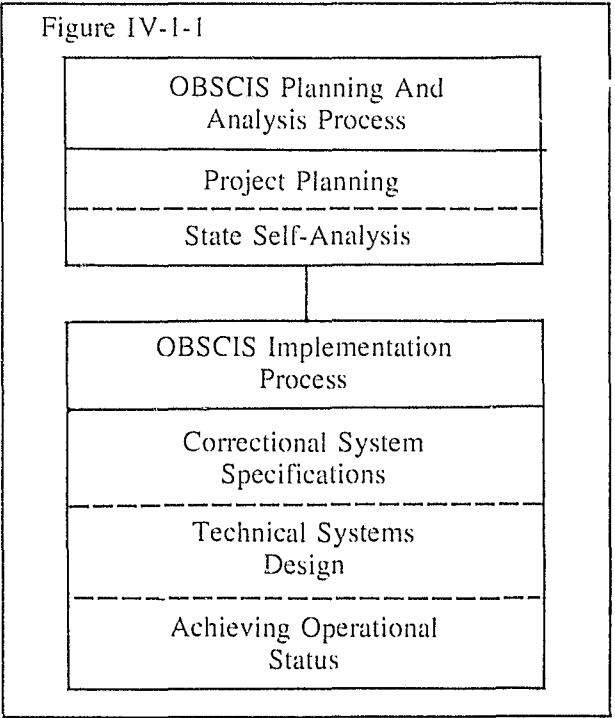
ning and State Self-Analysis deal with identifying and specifying the general needs of an individual corrections agency and developing a plan to meet those needs. The structure of these first two phases was developed especially to meet the needs of states engaged in OBSCIS system development. The final three phases grouped under the category of OBSCIS Implementation Process use proven methods to plan and control the technical aspects of implementing an information processing system.

Volume 5 of the OBSCIS Report contains an example of the use of this Implementation Plan by a hypothetical state. Review of that volume will add perspective to the work plan steps noted in this volume.

The resource materials provided with the OBSCIS model are structured to support a modular or phased approach to systems development and implementation. This philosophy, followed throughout the Plan and in the example in Volume 5, will support the achievement of system benefits in a more rapid, successful manner than would a single large complex system development effort.

The following work plans are arranged in logical sequence together with some key considerations and comments useful in assisting a state to create its own unique OBSCIS Implementation Plans.

CHAPTER 2. PROJECT PLANNING

This phase consists of a series of activities aimed at aiding a correctional agency to initiate and plan the initial aspects of its systems development effort. Within most states, all of the effort associated with this phase can be completed in three to six weeks.

Project Planning begins with organizing a project team and defining corrections management goals and scope for the project. In addition, work plans are developed and resources estimated for complet-

ing the State Self-Analysis phase of this effort. Upon completion of the phase a request for funds for part or all of the remainder of the project may be generated.

The end result of Project Planning activities will be to establish the structure, plans, and management controls necessary for the basic direction and guidance of the project.

OBSCIS WORK PLAN

PROJECT PLANNING PHASE

ACTIVITY
  TASK
    SUBTASK
	CONSIDERATIONS

I. *Organize The Project Team*	
1. Establish the organization of the project team.	• Initially, the project team is concerned entirely with Project Planning. At this point, the team could consist of only one person from corrections management. Later project efforts would require an expanded project team.
1. Identify the agency responsible for the state Corrections Information System (CIS).	
2. Identify persons within the agency who will be charged with design and content responsibility for the state CIS.	• OBSCIS materials should be considered as required reading for anyone who will become heavily involved with the project.
3. Identify agencies other than corrections which should have representation on the project team.	• The main intent of the project team is to plan for and be responsible for the implementation of the new CIS. Representation on the project team should include:
4. Identify key current and potential future users of the new state CIS.	— Corrections administrators — Users of the new CIS
5. Identify the corrections administrator(s) who will have ultimate project management and decision authority within the project team.	— Technical and planning personnel — Others, based on a state's particular environment
6. If appropriate, establish an OBSCIS Management Steering Committee.	• Although corrections administrators may decide

not to include other agencies as working members of the project team, this should not preclude obtaining in put from and providing outputs to these users of the CIS. For instance: will the new CIS service other than correctional needs? If law enforcement or parole functions will be included as users, they should have representation in the project, even if only in a management-review capacity.

● State planning agency personnel should also be considered as project team members, particularly if they may be involved in project funding.

● Project team management responsibility may be held jointly, depending upon the composition of the project team.

● Involvement of potential future users of the new CIS should be considered if their potential contributions relate to future expandability of the system. Which agencies may have an indirect impact on the system in the future and what types of information would they require?

● The inclusion of appropriate personnel on the project team or in a review or communications capacity can significantly impact the ease of later implementation of the CIS.

● Although it is possible to perform the Project Planning phase without technical personnel, it is strongly urged that personnel experienced in corrections and systems be heavily involved in the State Self-Analysis phase of the project, which follows the planning phase.

● It is mandatory that management approve and support the necessary involvement of each team member. Lack of proper understanding and approval may result in insufficient availability, which in turn may cause the project quality and schedule to suffer.

ACTIVITY TASK SUBTASK	CONSIDERATIONS
II. *Define The Scope Of The Project* 1. Review state statutes and federal laws to define any preliminary legal constraints. 2. Investigate procedures and documentation required for the acquisition of funds or resources, as required. 3. Determine current availability of funds and resources which establish the level of project effort.	● Constraints may be imposed on a CIS by the laws of a state, particularly in delineating the authority of the corrections function. Also, the key issues of privacy, security, confidentiality, and other social considerations must be considered. ● Procedures and documentation required for the acquisition of funds, including grants, should be investigated at this early stage because a grant request may be one of the outputs of project planning. Particular attention should be given to the justification procedure, approval process, timing, and matching fund requirements of the grant request procedure. ● Current major CIS-related projects in process anticipated changes in authority, and other key jurisdictional or other political considerations should be recognized. For example, a definition of project scope might include the following considerations: — Decision to include the parole function as part of the CIS even though it is a separate organization. — Localized correctional community centers to which probation cases can be referred may not be included as part of the offender population. — An existing statewide Criminal Justice Information System (CJIS) may already be performing some corrections information processing, thus affecting the need for providing this service in the state's CIS. — Financial constraints or operational funds to support a CIS developed under federal funds may limit the project scope.

ACTIVITY
   TASK
      SUBTASK

CONSIDERATIONS

III. *Establish Management Goals For The New CIS*
1. Identify types of information the new CIS should supply to the users.
2. Identify the possible methods of supplying this information.
3. Determine timeliness requirements in supplying information.
4. Determine the key operational functions and known major problem areas. Use this information to assist in the development of priorities.
5. Define other internal state systems with which the CIs must establish a data linkage.

- This activity is not intended to design the proposed CIS. Rather, corrections administrators should attempt to determine the long-range objectives of the state in terms of correctional information. They should consider how large a step they want to take in developing and implementing a new system. For example, if all the systems are presently manual, should consideration be given at this time to any on-line data processing systems development projects?

- This activity could be accomplished by corrections administrators alone but they may consider contacting upper-level officials in other agencies which would be impacted by a CIS. If many other agencies are to be involved, it is suggested that corrections administrators provide the basic list of goals as a guideline.

- A list of current problem areas, needed management or planning information not currently available, high-cost functions, or areas using significant amounts of critical personnel resources could serve as a starting point for a list of management goals.

- Data linkage with other systems should include both those which can provide critical input such as court mittimus data as well as those which can be serviced by a CIS, such as parole.

- These goals will be used later to guide the project team in choosing OBSCIS applications. For example, a statement of management goals might include:

  — Providing a common offender-identification number for tracking purposes.

  — Providing a CIS with the ability to track the institutional implementation of offender recommendations made during an admission/assessment process.

  — Reducing redundant information gathering on offenders throughout the corrections process.

  — Creating a CIS with the ability to monitor

ACTIVITY
   TASK
      SUBTASK

CONSIDERATIONS

        program results.
    — Providing recidivism statistics.
    — Providing a CIS with the ability to automatically tap court information systems for offender and sentence data.

IV. *Corrections Management Review*
1. Review project scope.
   1. Assure that all intended functions are included in the scope of the project.
2. Review project goals.
   1. Assure that all objectives of the project are defined and understood.
   2. Assure that all known constraints have been included.
3. Revise, add, or delete items to be included in the project scope and goals.

- After the project team review to assure understanding, there will be a final corrections management review to provide guidance to the project team in the further steps of Project Planning and State Self-Analysis. The defined goals and scope of the project must be analyzed so that those defined bounds are consistent with corrections management viewpoints.

- The output of this activity could be a document, listing the goals and scope of the CIS.

- This is the first in a series of reviews in which correctional administrators must participate to insure successful completion of the project.

- All defined goals and project scope statements should be challenged for reasonableness and achievability. General levels of low, medium, and high priority could be assigned to the goals for further direction to the project team.

ACTIVITY
  TASK
    SUBTASK

CONSIDERATIONS

V. *Determine The Activities Required To Complete The State Self-analysis*
1. Identify the activities necessary to investigate the pesent corrections environment and present information systems.
   1. Identify key personnel to interview concerning the present corrections environment.
   2. Identify the existence of any documentation concerning the present corrections environment.
   3. Identify existing systems directly or indirectly related to corrections which should be reviewed.
   4. Identify personnel involved with the present manual or EDP systems who should be interviewed.
   5. Use the activities listed in the next phase of this work plan as a guide in determining what tasks must be accomplished.

- This activity involves the development of a work plan activity list for the State Self-Analysis phase. This process basically includes a refinement of the list of activities shown in the following State Self-Analysis Work Plan.
- The project team should not attempt to detail plan all the tasks involved in State Self-Analysis. However, at least each major activity should be listed as a basis for planning the resources necessary for the next phase.
- A key element defining the level of effort required in this phase is the identification of the number of persons to be interviewed, the amount of existing documentation to be reviewed, and the extent of the existing systems to be reviewed.
- When identifying personnel involved with present systems, not only users should be identified but also input preparation, processing, and output disposition personnel should be interviewed.
- Planners should not rely completely on documentation of existing systems, since this may not be current. It may be used as a starting point in the process of reviewing the system with key personnel. In identifying the personnel to provide input concerning the "corrections environment," special emphasis should be placed on contacting those who can provide insight into trends such as community corrections or the receptiveness of corrections personnel to new information systems or data processing.
- In planning the review, administrators should assure that the following functions are investigated:
  - Admission
  - Assessment
  - Institutions
  - Parole
  - Movement Status
  - Legal Status
  - Management and Research
  - National Reporting

ACTIVITY
  TASK
    SUBTASK

CONSIDERATIONS

- Administrators should plan on reviewing as many of the current corrections systems as feasible regardless of whether or not they are specifically related to OBSCIS applications. This will aid in determining whether parts of these other systems should be included in the CIS as a state unique capability.
- Another key activity is to determine the sequence in which the self-analysis tasks should be performed. For example, it is usually preferable to start with an over-view discussion of a present system or a review of existing documentation before conducting any interviews.
- The final output of these steps is a list of tasks which must be accomplished in the next phase.

2. Identify the steps required to perform the following activities in selecting the desired OBSCIS applications.
   1. Obtain thorough understanding of the goals of the particular state.
   2. Make a basic selection based on the goals of the particular state.
   3. Determine feasibility of selection through a review process.
   4. Use the activities listed in the State Self-Analysis phase of this work plan as a guide in determining the detailed tasks which must be accomplished.

- A basic assumption in the selection process is that the Core Data Base and the three applications are needed to satisfy national reporting requirements.
- Administrators should attempt to consider all tasks that will be involved in the selection of the OBSCIS applications. It is anticipated that the list of tasks and sequence of performing them will closely follow the steps shown in the Work Plan for State Self-Analysis phase.
- The portion of the Self-Analysis phase related to application selection should be referenced for any additional activities required.

ACTIVITY
   TASK
      SUBTASK   CONSIDERATIONS

VI. *Determine Resource Requirements Needed For The Next Phase*
1. Determine what type of skill is required for each task defined in the previous activity.
2. Estimate the amount of time required to conduct interviews, review materials, and complete other tasks.
3. Use these estimates to compute the total effort required, by task.
4. Determine what manpower resources are available to conduct the tasks in the State Self-Analysis phase.
5. Determine the availability of people to be interviewed and develop the sequence and timing of interviews.

- Resources can include project personnel required to complete designated tasks, as well as support services and facilities such as clerical, duplicating, working space, file space, and office equipment. In this activity, the need for the support resources can be easily defined, since project personnel requirements are known.

- An estimate is a judgment or a "best guess" at a reasonable amount of time needed to complete a task. For example, one hour is a reasonable amount of time to conduct an interview while one to two days may be required to review systems documentation.

- If it becomes difficult to estimate times for certain tasks, it may be because the tasks are too large and should be broken down. For instance, it is easier to estimate the time required to review contents of a series of specific reports than for review of all the output of a system.

- In certain cases, the establishing of an estimate of effort for a particular tasks, from a management standpoint, serves to restrict and define the amount of depth at which each task will be undertaken.

- Corrections administrators should note that personnel from other agencies could be used as resources in the Self-Analysis phase of the project.

- Outside sources of technical or planning support should be investigated at this point if qualified staff is not available.

- The end product of this activity is an estimate, by skill type, of the effort required in people days, tentative interview schedule, and tentative resource assignment for each task outlined as a result of the prior activity. Once the resource requirements are established, the related support services can be determined. In general, the total elapsed time required to complete the Self-

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ACTIVITY
   TASK
      SUBTASK   CONSIDERATIONS

Analysis phase should typically not exceed two to three months. A considerably shorter time could be required depending upon the existing situation and level of current CIS related developments in each state. However, since the State Self-Analysis phase is the basic foundation and planning activity used to control the development of the CIS, this activity should not be unduly curtailed.

VII. *Develop A Plan With Associated Costs To Perform The State Self-Analysis Phase*
1. Determine schedule for the next phase.
   1. For each task defined for the next phase, finalize personnel assignments.
   2. For each task, finalize the people days required for the person assigned.
   3. For each task, note the planned start and completion date.
2. Estimate costs associated with performing the next phase.
   1. Determine costs of internal personnel.
   2. Determine costs of any vendor services which may be used.
   3. Determine costs for materials, facilities, travel, and support services needed specifically for the next phase.

- The work schedule consists of the tasks listed in sequence. In addition, people requirements, estimated times, and completion dates are on the work schedule.

- Scheduling problems may be caused by the lack of availability of people to be interviewed as well as personnel to conduct the interviews. Any conflicts should be resolved prior to starting the next phase.

- The final output of this task should be reviewed for feasibility by the assigned people. One purpose of planning is to provide the ability to revise the schedule before actually beginning the work.

- Another output of this task would be a list of people to be assigned to the next phase of their time commitments.

- Internal costs may be calculated by developing an hourly rate based on the person's yearly salary or charge rate and extending it by the time commitment.

- Vendor costs would be obtained from their proposal or estimate for services.

- Other support costs can be obtained from standard floor space or duplicating charges.

- The extent of the preciseness of the costs to be determined in this step will depend greatly on whether additional funding is required to complete the Self-Analysis phase.

ACTIVITY
  TASK
    SUBTASK   **CONSIDERATIONS**

VIII. *Corrections Management Review Of The Planned Activities, Required Resources, Associated Costs, and Schedules For The Self-Analysis Phase*
1. Determine if the necessary tasks for the Self-Analysis phase are reasonable. Insure that all areas defined in the scope of the project are included.
2. Determine if the estimates of effort and personnel required are reasonable.
3. Determine if the estimates of required facilities and support are reasonable.
4. Determine if the required resources are available or whether outside vendors will be required.
5. Modify or change the plan for the Self-Analysis phase as required.
6. Obtain commitment for the required internal resources.
7. Determine if a request for additional funding will be required to complete the Self-Analysis phase.

- Corrections management should attempt, before proceeding with the project, to see if the defined activities and the estimates made for the project relative to personnel and other support resources are within the bounds of the previously defined goals and scope of the project. These reviews will happen periodically through the project so that management can assure itself that the state correctional goals are being met.

- A key objective at this time is to obtain the necessary commitment of internal resources to the project. This also could be a time to announce the project purpose to all concerned prior to starting the next phase.

- If the current budget will not cover the estimated costs of the next phase, correctional administrators will have to initiate a request for additional funding through internal or external sources.

IX. *Prepare Fund Request, If Required*
1. List goals and scope of proposed project.
2. Describe planned activities, required resources, and related estimated costs of the State Self-Analysis phase.
3. Prepare documentation as required for the fund request including a narrative, costs, and benefits.

- Exact definition of the new CIS has not been determined. Therefore, a complete precise economic evaluation cannot be made. This fund request would normally cover only the activities to be completed in the State Self-Analysis phase.

- Administrators may decide, because of the timing of the funding process, to request funds for the entire project at this time. In this case, additional planning will be required to include the plans for the OBSCIS Implementation phase.

- Each state may have unique methods of processing a funding request depending upon whether already existing funds or resources are to be used or whether special grant applications are to be

written. While the grant-request procedure may vary considerably for each state, it will typically involve some of the following considerations:
— Identification of proper funding category.
— Assurance of required matching funds.
— Proper categorization of project cost items.
— Adherence to proper bidding procedures if outside vendors are to be involved.
— Organization of proper approvals in the funding process.
— Identification of projected benefits.
— Timing schedule of fund needs by budget year.

X. *Establish Methods Of Project Control And Management Review.*
1. Develop preliminary schedule of review meetings.
2. Introduce project progress reporting methods.
3. Identify special status reports and their frequency of preparation as required for funding agency reporting.
4. Finalize work plan, schedule, and cost estimates, if required.

- Since the corrections administrator will have a key role throughout the project as project manager, it is necessary at this early stage to develop the project management tools.

- The estimated times and completion dates for the tasks defined in the work plan will be developed. Persons responsible for individual tasks will be required to report progress on a regularly scheduled basis. Corrections administrators can then review tasks completed to date, comparing scheduled progress with actual results. Additional resources can be acquired or reallocated to insure that progress is achieved on target. Cost expenditures for the project can also be monitored in this manner.

- A final review of the work plan and schedule should be conducted just prior to the point when the project is about to move into the next phase. This would be required if a significant time lag occurred between planning for and starting the next phase. In addition, cost estimates should be reviewed.

CHAPTER 3, STATE SELF-ANALYSIS

This phase is designed to help a state take a closer, more detailed analysis of its corrections information processing requirements and prepare a preliminary definition of its own desired corrections information system. This is accomplished primarily through interviews with key personnel involved with corrections and its related information processing needs. These needs are analyzed by using the tools provided with the OBSCIS model to create a state's own CIS. This phase is performed by a project team of corrections personnel and systems analysts. Upon completion, the project team delivers a complete plan and budget for implementation of the state's corrections information system. Included are specifications for each of the applications to be implemented, the end products they will deliver, the inputs they will required, and the effort involved for implementation.

A key element of this plan will be the definition of the strategies to be employed in developing and implementing the system in a modular fashion to enhance its impact and ease of implementation.

An in-depth management review is conducted at this point. It is made clear that the systems development team, including managers of the functions which will use the system's outputs, have agreed on what they are going to accomplish, how much it will cost, and how long it will take. Accountability and control are built into the project at this point. Significantly, the state also has, upon completion of this phase, all of the detailed data needed to apply for funding, if required, for its OBSCIS system.

OBSCIS WORK PLAN

STATE SELF-ANALYSIS PHASE

ACTIVITY
  TASK
    SUBTASK
	CONSIDERATIONS

I. *Initiate State Self-Analysis Phase*
  1. Assemble the project team.
  2. Present the work plan in order to orientate the new members of the project team.
  3. Discuss the project control mechanism.
  4. Present tentative review meeting schedules.
	• This activity may start at a meeting where corrections administrators begin the Self-Analysis phase. The work plan, with a schedule of dates, is presented to the project team and the work itself actually begins.
	
	• The schedule of review dates may be used as a project control mechanism. That is, review meetings could be scheduled between the initiation and completion date of each activity. This allows administrators and the project team an opportunity to review progress and discuss any problems.

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- This activity should not necessarily be limited to one meeting. If additional time is required to assure an understanding of what must be accomplished, additional meetings should be scheduled.

II. *Investigate Basic Factors Affecting The Design Of The New State CIS.*
  1. Determine corrections environment factors which could affect the CIS.
    1. Interview personnel on the interview schedule previously established.
    2. Review documentation identified during project planning.

- The first task involves determining if any special situations exist that could affect the selection of OBSCIS applications. For example, what experience has been accumulated within the state in information system development? If the experiences were negative, what were the reasons?

- A sufficient amount of time should be utilized by the project team. They should feel comfortable with a full understanding of the elements within the corrections environment that could directly or indirectly affect the new CIS.

  2. Determine population inventory at certain points in the present systems.
    1. Determine inventory at offender intake points.
    2. Determine inventory at offender transfer points.

- The purpose of the second task is to gain an understanding of the size of the offender population at certain points in the correctional facilities. This will aid in determining the areas of initial emphasis in the development of the new CIS.

- A specific output of this task is a list of population volumes at intake, transfer, and release points in the correctional facilities.

  3. Identify the organizational elements directly or indirectly related to corrections.
    1. Define the unique functions performed within each identified organization that could impact the new CIS.
    2. Determine the relative levels of authority within each identified function.

- Although some of the present systems may be computerized, technical personnel are not required to complete this task.

- The main factor affecting the estimated people-days needed to complete this task is the number and size of the systems to be reviewed.

- For those systems that are computerized, this task could include a preliminary investigation of information transactional flows. That is, a transaction is traced from the time it is generated in the updating of a file to the time it appears on an output report.

  4. Review the current corrections budget.
    1. Compare the current operating budget with present volumes.
    2. Review the budget for planning and operations.
    3. Review the budget for correctional staff and EDP resources.

- To aid in defining unique state needs, the project

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team should interview functions directly or indirectly related to the corrections organization. For instance, during Project Planning, parole representatives may or may not have been included on the project team. At this point, parole personnel should be interviewed to determine their particular needs.

- An understanding of levels of authority within each function is important to aid in determining how each function impacts the corrections process.

- Corrections administrators should review the allocation of the current budget relative to planning, operations, staff, and EDP resources. Although sufficient funds may be available to perform the remainder of State Self-Analysis, a majority of these funds may be allocated to the operations of existing systems.

- If additional funds are not available for systems development and implementation, this task is the preliminary work in preparation for a request for funding at the end of this phase.

  5. Review the state's current information processing capabilities.
    1. Identify the hardware processing capability either internally or available to the corrections agency.
    2. Determine the manpower resources available to the corrections agency.

- The intent of this task is not to define, from a technical standpoint, exactly what type of systems could be supported within the state. Instead, it is intended that the project team have a cursory understanding of present facilities available to them.

- This task should take a minimal amount of time. Interviewing of personnel is not required.

  6. Investigate legal and social constraints.
    1. Determine specific requirements because of federal laws.
    2. Determine specific requirements because of state laws.
    3. Determine requirements because of prominent social groups which could impact legislation.
    4. Determine if additional or clarifying state legislation is necessary to support the CIS.

- A specific output of this task would be a list of facilities, personnel, and corresponding processing capabilities currently available.

- A high level of consideration must be given to the issues of security, privacy, and confidentiality. These issues, treated extensively in Volume 1, include such items as equal treatment of all inmates. That is, a thorough understanding of such issues as Affirmative Action programs and prison rights must be obtained.

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    TASK
        SUBTASK

CONSIDERATIONS

III.   *Collect Necessary Data And Define Current Manual And Automated Information Systems*
    1. Define existing systems.
      1. Eliminate definitional problems by establishing a glossary of terms.
      2. Identify files and corresponding data elements.
      3. Establish what reports are produced, their contents, frequency, and distribution.
      4. Determine the source and mode of input to update files.
      5. Determine transaction volumes of input data.
      6. Investigate controls that insure the integrity of the data.
      7. Investigate other clerical work required to support the systems.
      8. Determine what other agencies interface with corrections systems.
      9. Investigate access of files by other agencies and general level of privacy of data.
     10. Identify organization responsible for each system being reviewed.

- This task will probably be one of the larger ones performed in the State Self-Analysis phase. The subtasks listed must be done for every system defined in project planning. The estimate of man days required to perform the individual subtasks in a review of each system is dependent on the size of the system.

- The first step in performing this task will probably be a review of current documentation for each system.

- Before beginning, the project team should tentatively decide the format of its final output. Because this information will be analyzed relative to the OBSCIS model, it is suggested that the project team organize the data collected in the same way as the OBSCIS model is presented.

- It is essential, as a minimum, to review the systems and procedures used by the state to process the following:

  — Admitting
  — Assessment
  — Institutions
  — Parole
  — Status Monitoring
  — Legal Custody Monitoring
  — Management and Evaluation
  — National Reporting

- A major element to investigate when reviewing the present systems is the offender identification numbering system. If the new CIS will cover portions of the existing systems, it is critical to understand how offenders are identified in each system.

- Term definition is often overlooked by many people performing a systems review. Because it is critical that all functions involved understand the language being spoken, it is necessary to establish a glossary of terms.

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- Subtasks 2, 3, and 4 are key concerns of this task. That is, the project team must gain a full understanding of the inputs, processing, and outputs of all systems selected for review. It is not implied that only EDP systems are involved. The three elements are also present in a manual system.

- The project team must have a full understanding of the controls used to insure the integrity of the data. This is to aid them in making a judgment as to whether or not the controls are sufficient. This information will be used later in the design of the new CIS.

- The project team should investigate what clerical work is required to support the systems in order to discover if any duplication of effort exists. This information will be used later when determining if additional staff is required to support the new system.

- The project team must investigate what data linkage takes place between the correctional agency's present systems and other systems within the state. For example, is the correctional agency supplying mandatory information to other agencies in the state or are some corrections systems dependent on information being supplied by other agencies?

- A thorough understanding of the information security of every system must be established to determine if the level of privacy of data is sufficient.

- An output of this task may include a flow chart of the functions performed within each system being reviewed.

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2. Identify facilities used to support the existing systems.
   1. Identify EDP equipment being utilized.
   2. Identify manually operated equipment being utilized.
   3. For each piece of equipment identified, estimate the amount of time required to process the information.
   4. For each piece of equipment identified, determine whether any excess capacity exists.

3. Define present manpower resources.
   1. Identify numbers and levels of skill of the technical staff.
   2. Identify numbers and levels of skill of the operations staff.
   3. Identify numbers and levels of skill of the support staff.

4. Determine the costs of operating the present systems.
   1. What is the cost of the equipment used to support the present systems?
   2. What is the cost of the manpower and other resources required to support the present systems?

- This task is an extension of the definition of present systems. For each system defined, a list of equipment and resources utilized to support that system must be developed.

- As a preliminary step in determining the cost of running the present systems, the amount of time to process each system must be determined.

- Excess capacity information aids in determining how much, if any, of the new CIS can be supported by present equipment.

- The project team should determine if the present staff can support all present systems. One consideration may be the amount of overtime being logged.

- If there appears to be excess capacity in manpower resources, is the excess sufficient to support a new system?

- This information will be used later in determining any additional resources required to support the new CIS.

- This task may be initiated while interviewing to define the present systems.

- This is the first step in establishing the cost/benefit evaluation of the present systems.

- The time required to perform this task is minimal. Vendor invoices may be used to determine the cost of hardware and software. The payroll system could provide the input data to determine the cost of the manpower required to support the present systems.

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IV. *Determine What Future Plans Exist For The Present Systems*
   1. Investigate new manual and automated systems under development.
      1. Determine basic functions of the proposed systems.
      2. Establish what additional resources will be acquired to support the new systems.
   2. Investigate plans for modification of present systems.
      1. How will the source of input to the systems be impacted?
      2. Determine if the mode of processing data will change.
      3. Determine if the form of the output will change.
   3. Investigate plans for the modification of present manpower resources and equipment facilities.
      1. Identify hardware on order and its purpose.
      2. Identify hardware being phased out.
      3. Identify projected changes in manpower levels.

V. *Assemble Documentation And Review*
   1. Prepare final documentation of all manual and automated systems and procedures that have been reviewed.
      1. Prepare interview summaries listing functions performed by personnel interviewed.
      2. Prepare flow chart of manual procedures.
      3. List forms used in all systems.
      4. List data elements and their definitions in all systems.

- Although the project team now has information as to the present state of correctional systems, some documentation must be assembled regarding the plans for the intermediate future. The purpose of this is to establish an understanding of where the new CIS will supersede portions of not only the present systems but systems which are in the planning stage.

- The intent is not a thorough review of the planned systems, but one in which sufficient information can be gathered to understand how the planned system and resource changes could impact the new CIS.

- It is suggested that the documentation of the present systems be organized in the same manner as the OBSCIS model. This makes possible direct comparison between present systems and OBSCIS applications.

- Based on the method used to collect information during the review, this task may merely be a formalizing of that documentation.

- It is imperative that the documentation be reviewed with present system personnel. Since future decisions will be based on this documentation, its integrity must be assured.

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2. Review assembled documentation.

   1. Discuss documentation with personnel responsible for each system to insure the integrity of the review.

   2. Revise documentation if required.

VI. *Define Requirements And Prioritize*

   1. Review the project's scope and goals defined in Project Planning.

   2. Analyze present systems relative to scope and goals to determine what information is presently being supplied.

   3. Review the cost of operating the present systems.

   4. Describe correctional needs not presently being satisfied.

      1. What data elements are required?

      2. What reports are required?

      3. What timeliness considerations are present?

   5. Assign priorities to requirements based on goals established in Project Planning.

   6. Prepare management summary of the defined requirements.

      1. State the general description of each system reviewed.

      2. List inputs, processing, and outputs of each system reviewed.

      3. List requirements not being satisfied by existing systems.

   7. List the benefits of each system reviewed.

Considerations for VI:

- The project team is preparing for a management review of work done to date. In effect, they will be seeking a "buy-off from management on what the new CIS must provide relative to what information is being supplied now. That is, what overlap areas exist between OBSCIS and present efforts.

- Costs of the present systems are important because a new CIS may be able to supply the same information for less cost.

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VII. *Perform Management Review*

   1. Review management summary of the requirements prepared by the project team in Activity VI.

   2. Review correctional goals not being satisfied by the existing systems.

   3. Review priorities assigned to new requirements.

Considerations for VII:

- Correctional administrators must now review the "field work" done by the project team. It is important for them to raise as many questions as possible to assure a complete understanding of the documentation collected because this documentation will be used to aid in selecting applications for the new CIS.

- Correctional administrators must provide guidance to the project. Therefore, they may desire to realign the priorities established by the project team.

- The only guideline for estimating the amount of time required is that administrators should take as much time as necessary to feel comfortable with the understanding of the requirements defined and the priorities established.

VIII. *Review Of The OBSCIS Model*

   1. Obtain a preliminary understanding of the model.

      1. Review the contents of the Core Data Base.

      2. Review the inputs and reports produced by each of the OBSCIS applications.

      3. Study possible modifications in the OBSCIS applications needed to meet unique state requirements.

Considerations for VIII:

- Before the project team can utilize the OBSCIS model, it must gain an understanding of the data base and the OBSCIS applications.

- The data elements required to support the modification of each application not only involve the consideration of the desirability of the elements in the data base, but the effort required to supply this input and the source from which it must be obtained.

- In addition to reviewing what outputs are produced, it should also be noted that the level of implementation may indicate the mode of delivery of those outputs. For instance, are printed reports produced or is on-line inquiry to a computer the mode of accessing the data?

- In addition to viewing what types of inputs are required, the project team may also investigate the need for control over those inputs to insure the integrity of the data supplied.

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2. Review the OBSCIS model relative to the present systems and defined requirements.

  1. Define the portions of the model which are represented by the present systems.

  2. Define the differences between the present systems and the OBSCIS model caused by a different operating environment.

  3. Define differences between the present systems and the OBSCIS model caused by different methods of processing, use of outputs, or availability of data to be collected.

  4. Outline all defined requirements which exceed the present systems capability or OBSCIS recommendations.

3. Review the OBSCIS model relative to the implementation levels in each application.

  1. Identify the different levels of implementation for each application that will satisfy the state requirements.

  2. Identify input/output requirements based on these levels of implementation and unique state needs.

  3. Identify levels of required processing facilities needed to support each application based on the level of implementation chosen, volume of activity involved, and response time required.

  4. Identify general levels of manpower resources required to develop and generate the CIS based on each application's level of implementation.

4. Review the OBSCIS model relative to the level of data base sophistication for each application.

CONSIDERATIONS

- It is necessary to perform this task because the project team may find that segments of the present system will cover some of the goals established by corrections administrators. That is, there may be no need to implement a certain OBSCIS application or portion of an application because a present system may be utilized instead.

- State-unique requirements should surface during this process.

- The matching process will be aided by the definition of requirements categorized in groups similar to the OBSCIS applications.

- A specific output of this task may be the preliminary identification of resources required for each application.

- Technical personnel should be utilized for this task since the understanding of what each application will be relative to its level of implementation will be needed later for the OBSCIS Implementation phase.

- The amount of data that can be collected on an offender should be categorized into:

  — Data required for the Core Data Base.
  — Data required to produce the necessary outputs for day-to-day operation.
  — Data which may be collected for some as yet undefined purpose in the future.

- The ease of gathering the data and the method of verifying its accuracy must be considered in determining the feasibility of inclusion in the data base.

- Determination should also be made of whether the data are static or whether they will be updated and whether it is important to keep a chronological listing of the prior version of the data.

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  1. Identify the different levels of the data base needed to satisfy the state requirements for each application.

  2. Identify the possible outputs that could be provided based upon the information in the data base.

  3. Determine the levels of processing required to collect, store, and retrieve this additional data.

Identify the required levels of manpower resources to collect and validate the data.

IX. *Select Data Elements, Applications, And Levels of Implementation*

  1. Make initial selection of the Core Data Base and the other data elements needed to satisfy the state's requirements.

  2. Make initial selection of applications.

    1. Select applications necessary to establish offender record and offender status tracking in order to satisfy National Reporting requirements.

    2. Determine level of implementation for each application.

  3. Make additional selection based on conversion of the present systems.

    1. Identify applications or portions of applications which can be included in a CIS by a direct conversion of the present system.

    2. Determine chosen level of implementation of each application.

  4. Make additional selection based on unique state needs.

    1. Identify applications or portions of applications which should be adopted to satisfy state correctional needs which are not necessarily related as part of OBSCIS.

CONSIDERATIONS

- Although correctional administrators have defined certain goals and the scope for the new state CIS, the first step would be to assure that the Core Statistical System requirements placed on the state re met. Thereafter, applications and portions of applications are chosen in an initial selection process to satisfy the offender-based information requirements of the state. A key selection criterion for the various levels of the applications should be the incremental benefits to be derived with the information provided by each succeeding level balanced against the projected additional cost in providing it.

- The determination of the level of implementation chosen for the various applications is also a matter of defining the level of implementation required to satisfy state needs.

- It is assumed the Core Statistical System will be implemented.

- A specific output of Task 2 is a "first pass" at selecting applications and levels of implementation that will make up the new state CIS. This is only a starting point; depending on the goals and scope defined by correctional administrators, this list may or may not be expanded on by proceeding into the next task.

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CONSIDERATIONS

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2. Determine the level of implementation of the related applications.

5. Perform a preliminary investigation of the factors which could impact the feasibility of a chosen application or expansion level.

  1. Define applications or modifications to applications that are prohibitive due to the time of development or operating costs.

  2. Define applications that are not permissible because of state policy.

  3. Identify problems relative to data elements which arise due to security and privacy issues.

  4. Identify problems associated with the resources available to develop the CIS chosen.

6. Identify the preliminary benefits of the chosen applications.

  1. Determine tangible benefits by identifying savings realized through replacement or consolidation of present systems. The user of the system should identify the benefits, not the CIS project team. If the user is to be responsible for achieving the benefits, he must approve them as feasible.

- Where the initial selection based on the Core Statistical System was in fact mandatory, Tasks 3 and 4 are optional, based on the current services provided in existing systems.

- Correctional administrators have previously defined cost constraints of the new proposed state CIS. After the initial selection of applications has been made in the prior activities based on the goals and scope of the project, costs involved with the selected applications and levels of implementation must be reviewed. At this point, this process of identifying those chosen applications which are prohibitive in terms of cost should be performed by personnel experienced in both corrections and systems. The cost estimating would be done on a judgment basis based upon past experience and also using the Example in Volume 5 of the OBSCIS report. The attempt at this point is not to generate exact costs but only to exclude those applications or levels of implementation which are obviously too costly.

- These interim review steps are intended as a project control tool. That is, at select points in time, final cost estimates will be developed for review to assure that the project is staying within the originally defined bounds. For example, correctional administrators may have reviewed the impacts of installing an on-line computer system when no similar data processing capability existed in the state.

- A specific output of Task 5 may be direction to the project team to perform another selection process by repeating the prior four tasks. It may be a modification of the applications or levels selected under these tasks.

- Legal constraints may again be reviewed to determine if some elements of chosen applications violate certain state statutes. For example, certain offender-based data cannot be kept in the same files or accessed from the same files as other offender-based data.

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X. *Balance All Chosen Applications To Identify Conflicts. Select Alternatives*

1. Establish application cross-reference conflicts.

  1. Identify duplicate portions of data elements used to support chosen applications.

  2. Identify duplicate sources of input to update chosen data elements.

  3. Identify duplicate generation of output information.

2. Perform a final analysis to eliminate unfeasible processing methods or identify possible alternative CIS definitions based upon known constraints.

  1. List those portions of the CIS which appear unfeasible.

  2. List those portions which will require significant additional funding.

  3. Define alternative methods of phasing the development and implementation of the CIS based upon constraints.

  4. Perform final review of potential processing methods (i.e., manual, batch computer, business machine, on-line computer) which are not suitable for the CIS defined.

- Although the OBSCIS model has been designed so that no duplication exists in the Core Statistical System and applications, the project team, through the course of the modification of applications to meet the state's unique needs, may have introduced some at this point. A review is required to eliminate any duplication.

- If duplication was not introduced through the modification of applications, it may be introduced because of an overlap with existing systems.

- The project team must review proposed sources of input chosen to update selected data elements. For example, if an offender's birthplace is being collected in more than one specific place, one source of input may be eliminated.

- Similarly, if the same output is being produced in two separate processing functions, one could be eliminated.

- Note that no systems design work is being done to this point. Rather, the project team is attempting to clearly define data elements, applications, and levels of implementation before proceeding.

- It is quite possible that the entire task of selecting applications may be done more than once. It is up to the correctional administrators to provide guidance for the number of iterations through this process.

- This activity is performed by correctional administrators and technical support staff from the project team.

- This is another review point conducted by correctional administrators to assure the chosen applications meet the state's goals within the defined constraints.

- There are three basic departure points from this particular activity.

  — Additional funding may be required.
  — The entire selection process may be redone.
  — The project team can modify the defined CIS before proceeding.

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- Although an entire system has been chosen in the selection process, constraints such as funding may require implementation in stages.

- A method of phased development and implementation is strongly recommended, particularly in response to developing viable systems within known resource and funding constraints.

- A "future project list" may be made, incorporating the portions that will not be implemented initially.

XI. *Prepare A Preliminary Definition of the State's CIS.*

  1. List the data elements to be used to support the Core Statistical System and the chosen applications.

    1 List data elements.

    2. Define data elements as to their logical meaning.

    3. Indicate where data elements link to produce additional information.

  2. Define the required inputs and outputs.

    1. List source of each input needed to update specific data elements. Indicate where and how it will be collected and verified.

    2. Define the type of output, frequency, distribution, and media.

  3. Define the functions to be performed by the CIS.

    1. List type of processing for each application.

    2. Define update cycles.

    3. Define reporting cycles.

  4. Review the preliminary definition of the system.

- After corrections administrators have determined that the selected applications are in fact ones that will meet the goals of the particular state, the project team can move ahead to make a preliminary definition of the new CIS.

- A specific output of this task is a list of the chosen data elements needed to support the Core Statistical System and all applications, or portions of applications, chosen.

- This task is similar to the preliminary definition of the data base. Inputs and outputs are listed for the Core Statistical System and each application.

- Particular attention should be given to the feasibility of collecting the input, particularly if it is not now available.

- The output could be printed, microfilmed, machine readable, or retrieved on-line by a computer system.

- During this activity, continual contact is maintained with correctional administrators culminating in a final review by them of the defined CIS.

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    SUBTASK

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XII. *Determine The Activities Required To Complete The OBSCIS Implementation Phase*

  1. Identify the activities from the following list necessary to convert the Core Statistical System and selected applications into Correctional System Specifications.

    1. Refine the requirements defined during the earlier activities.

    2. Review the constraints.

    3. Review selected processing modes of each application.

    4. Assemble applications into segments.

    5. Assemble segments into a conceptual systems design.

    6. Prepare a narrative describing the system.

    7. Use the activities listed in the Correctional System Specification phase of this work plan as a guide in determining what tasks must be accomplished.

  2. Identify the activities from the following list necessary to convert the Correctional System Specifications to a Technical Systems Design.

    1. Lay out the format of the output information.

    2. Define input documents and related media to be used to collect data.

    3. Diagram the basic functions of data flow.

    4. Determine the structure of the files.

    5. Develop program function sheets.

    6. Finalize requirements for processing resources.

    7. Establish the cost/benefit relationship of the new CIS.

    8. Use the activities listed in the Tech-

- This activity involves the development of an activity list for the entire OBSCIS Implementation phase. This process basically includes a refinement of the list of activities shown in the three remaining phases of the OBSCIS Implementation work plan.

- Since the development and implementation of a CIS is typically done in stages due to increase in the degree of successful results or due to funding or resource limitations, break the total CIS into logical portions such as Core Statistical System, Application 1, 2, etc.

- The ultimate CIS and, if necessary, the development stages should be kept in mind so that the Core Statistical System and the entire planned data base are developed first. Additional applications and levels which use the data in the data base can be developed in later applications. This would involve creating portions of a data base for the collection and storage of data elements to be used later and/or leaving space in the data base for later use.

- When performing the actual implementation tasks, the work plan will undergo refinements. Therefore, the project team should not attempt to define all the detail activities.

- The key element in defining the list of activities and level of effort in this phase is the size of the system to be implemented.

- If a computer system is to be implemented, corrections administrators should plan in this activity to investigate the availability of technical design and programming support if the current staff cannot fulfill the required effort.

- The planning is broken into three steps:

  — Correctional Systems Specifications
  — Technical Systems Design
  — Achieving Operational Status
  — Achieving Operational Status

ACTIVITY
  TASK
    SUBTASK

CONSIDERATIONS

nical System Design phase of this work plan as a guide in determining what tasks must be accomplished.

3. Identify and plan the activities necessary to perform the Achieving Operational Status phase. Activities to be planned include:

1. Develop programming specifications.

2. Perform programming.

3. Develop a plan for user training.

4. Develop a plan for system testing.

5. Develop a plan for conversion and parallel.

6. Conduct user training.

7. Conduct systems test.

8. Conduct conversion and parallel.

9. Perform final implementation.

10. Use the activities listed in the last phase of this work plan as a guide in determining what tasks must be accomplished.

The final tasks listed in the work plan should be reviewed by the project team to assure that all major activities have been included.

ACTIVITY
  TASK
    SUBTASK

CONSIDERATIONS

XIII. *Determine Resource Requirements For Implementation*

1. Determine what type of skill is required for each task defined above.

2. Estimate the amount of time needed to perform the tasks in the three planned phases.

3. Use the estimates of effort to compute the total effort by task.

4. Determine what manpower resources are available to conduct the tasks in the next phase.

5. Develop the sequence and timing of tasks.

- Requests for proposals can be issued at this point if outside services will be required. This will reduce the typical lead time problem in attaining these services.

- Personnel availability of other internal agencies may be investigated at this time.

- If it becomes difficult to estimate times for certain tasks, it may be because the tasks are too large. In this case they should be reduced to smaller logical increments of tasks.

XIV. *Develop A Schedule With Associated Costs To Perform The Implementation Phase*

1. Determine schedule for the next three phases.

1. For each task defined for each phase, finalize the personnel assignments.

2. For each task, finalize the workdays required for the person assigned.

3. For each task, note the planned start and completion date.

2. Estimate costs associated with performing the remaining three phases.

1. Determine costs of internal personnel.

2. Determine costs of any vendor services which may be used.

3. Estimate operational costs associated with actual running of the system.

1. Determine cost of hardware use.

2. Determine cost of support personnel.

- The work schedule consists of the tasks listed in sequence in the work plan with each task manned. In addition, estimated times and completion dates are on the work schedule.

- The final output of this task should be reviewed by all concerned to determine if, in fact, the schedule is feasible. One purpose of planning is to provide the ability to revise the plan before actually beginning the work.

- Another output of this task would be a list of people to be used in the next phase and their total time commitment.

- Internal cost may be calculated by developing an hourly rate based on the person's yearly salary or charge rate and extending it by the time of commitment.

- Vendor costs would be in their proposals or estimates for review.

- Operational cost estimates can be obtained from senior technical personnel on a judgment basis. Now is the time to get initial estimates of the potential operating cost of the system. These estimates will eventually be made by the state.

ACTIVITY
   TASK
      SUBTASK   CONSIDERATIONS

XV. *Perform Corrections Management Review of the Planned Activities, Required Resources, Associated Costs, And Schedules For The OBSCIS Implementation Phases*

1. Determine if the necessary tasks for the Implementation phase are reasonable and include all areas defined in the scope and goals of the project.

2. Determine if the estimates of effort and personnel required are reasonable.

3. Determine if the estimates of required facilities and support are reasonable.

4. Determine if the required resources are available or whether outside vendors will be required.

5. Modify or change the plan for the OBSCIS Implementation phases, as required.

6. Obtain commitment of the required internal resources.

- Management must determine before proceeding with the project, if the defined activities and the estimates for the project relative to personnel and other support resources, are within the bounds of the previously defined goals and scope. In effect, these reviews will happen periodically throughout the project so that management can assure itself that the state correctional goals are being met.

- If the current corrections budget will not cover the estimated costs of the next phase, correctional administrators will have to initiate a request for additional funding through internal or external sources.

- A key point at this time is to obtain the necessary commitment of internal resources for the remaining project phases.

XVI. *Determine If A Request For Additional Funding Will Be Required To Complete The Implementation Phase.*

- If funding for the entire project was not requested during Project Planning, it should be requested here. The same data previously mentioned in Project Planning will be necessary for funding.

CHAPTER 4. CORRECTIONAL SYSTEM SPECIFICATIONS

The major purpose of this phase is to achieve coordination between users and technicians in specifying what the new system is to accomplish. This is done to assure an ongoing level of communication comprehensible both to corrections officials and to data processing technicians. Users of the system specify the information outputs they desire, agree to the inputs they will provide, and agree on the processing of data which must take place to accomplish the desired results. This will include developing a definition of how the system would operate in terms of frequency of processing and distribution of output. Report, inputs, and data file formats are blocked out at a graphic level.

On completion of this phase, the data processing specialists have the inputs they need to develop technical solutions to the problems and detail requirements stated by corrections officials. In addition, a conceptual design of the system is produced for use as the basic communication tool between users and technicians. This phase and the following two phases are grouped under a logical category of OBSCIS Implementation work plans.

**OBSCIS WORK PLAN
STATE SELF-ANALYSIS PHASE**

ACTIVITY
   TASK
      SUBTASK   CONSIDERATIONS

I. *Refine The Defined CIS Through A More Detailed Requirements Analysis*

1. Define the content of the inputs, including resources and method of acquisition required.

2. Define the contents of all outputs and frequency of disposition.

3. Determine the methods used to control the data.

4. Identify the necessary supporting manual processes external to the CIS.

5. Identify any design constraints which would affect the design.

6. Refine the exact functions to be performed by the system.

- The intent of these tasks is to return again to the ultimate users of the CIS to review and finalize the detail requirements of the system. These requirements should be expressed at a nontechnical level.

- At the time of this review, the benefits to be realized by installation of the CIS can also be updated due to a clearer understanding of the defined CIS.

II. *Convert The Defined CIS Into Corrections System Specifications*

1. Review constraints relative to the system design.

   1. Review policy considerations internal to the state.

   2. Review schedule and timing consid-

- The conceptual systems design is the first step leading toward a technical systems design from which the system will actually be implemented.

- This phase is the first step at converting the CIS applications into one homogeneous system.

OBSCIS WORK PLAN
CORRECTIONAL SYSTEM SPECIFICATIONS PHASE

ACTIVITY
  TASK
    SUBTASK   CONSIDERATIONS

erations through to implementation.

3. Review technical feasibility considerations.

Therefore, while the considerations listed as subtasks here have been reviewed before, they must be considered in light of an entire system necessary to process the functions specified by the applications. For example, although an application can stand alone relative to its input, processing, and outputs, there might be some technical considerations in linking two applications together into a single system function. In addition, rather than designing one large system to incorporate all chosen applications, it may become more feasible to design a number of subsystems, each containing certain application functions.

- The considerations of modular development will also affect the segmentation of the CIS into subsystems capable of implementation in definable and logical pieces.

2. Define the processing modes of each application.

- As in the above task, the mode of processing such as on-line batch, or manual has been considered before relative to individual applications. These considerations must be viewed again now that the applications are being put together into one system.

- This task is essentially the highly creative one of translating the OBSCIS applications into a system design which will satisfy all the requirements specified in the chosen CIS. Technical personnel will, therefore, be required.

- These design activities do not imply that the CIS must be a computerized system as opposed to a manual one. Rather, it is the concept of a system which is able to accept inputs, store the data, and provide the desired outputs. These functions may be computerized or accomplished through manual processing procedures.

3. Balance conflicts in processing mode for all applications or portions of applications selected.

- This is another preliminary step in taking standalone applications and assembling them into system components and then assembling these components into one entire system or keeping them in separate subsystems.

OBSCIS WORK PLAN
CORRECTIONAL SYSTEM SPECIFICATIONS PHASE

ACTIVITY
  TASK
    SUBTASK   CONSIDERATIONS

1. Assemble sets of applications into design components.

2. Define processing modes for each design component.

- The project team may discover that processing modes selected for particular CIS applications are not compatible once the applications are put together into system components.

- Technical personnel will be required throughout this initial task.

4. Prepare a narrative of the design.

1. Describe how the system will operate and what functions it will perform.

2. Describe the various system components such as daily, weekly, monthly processing or on-line activities.

5. Produce a description of inputs.

1. Define the source and content of the inputs.

2. Define the media used to transfer input data for processing.

6. Produce a description of outputs.

1. Describe output content, type of media used to transfer the output information, and sequence of data.

2. List disposition and use of each output.

7. Describe preliminary system controls and backup/recovery methods.

1. Identify control points between applications.

2. Describe basic form of control.

8. Produce a flow chart of the conceptual design.

1. Show interaction of input with processing and files to produce output within previously defined system components.

9. Prepare a definition of the new system procedures as they will impact the current operations.

- Proposed hardware and software requirements may change once the CIS applications are assembled into a single design.

- This series of tasks is used to assemble the final documentation of the preliminary conceptual systems design.

- In addition to listing input, processing, files, and output, the project team is making a first attempt at introducing system contorls. This method insures the integrity of the data used to update the files.

- The main intent here is not to do a technical systems design from which programming specifications or manual procedures can be written; rather it is to put together a conceptual systems design whereby correctional administrators can see how selected unique applications have been combined into a system or components of a system.

- Another use of this conceptual system design is to aid correctional administrators in refining the work plans and schedules previously established during the Self-Analysis phase for the Technical Systems Design and final implementation phase of the project.

ACTIVITY
  TASK
    SUBTASK   **CONSIDERATIONS**

10. Produce a preliminary definition of the content and structure of the data base and other files.

11. Identify the method used to assure security and confidentiality of data.

III. *Refine The Work Plan Developed In The Self-Analysis Phase*

  1. Review the planned activities.

  2. Review the required resources.

  3. Review the work schedule and estimated costs.

  4. Revise any of the above items as required.

- The major purpose of the remaining tasks in this phase is to revise and update the prior estimates of tasks, resources, and costs for the remaining activities in the project. It is also an opportunity to more fully define the required tasks in the next phase of the project.

- Now that the applications have been roughly assembled into a system, the project team is more knowledgeable about the specific tasks that must be completed in the next phase.

IV. *Corrections Management And User Review Of The Conceptual Systems Design*

  1. Meet with users of the new CIS to obtain approval of the conceptual systems design.

  2. Review refined work plan, resource requirements, schedule, and costs.

- Just as in other phases of this project, correctional administrators must now review the next phase of the project.

- Now that correctional administrators more fully understand the tasks to be performed in the next phase based on the conceptual systems design, they are more fully aware of the levels of effort involved.

- Just as with the development of the preliminary work plan, correctional administrators may make another review of costs now that the applications have been assembled into a conceptual systems design.

CHAPTER 5. TECHNICAL SYSTEMS DESIGN

This phase involves technical preparations for the new corrections information system. All of the technical documentation necessary to make a computer system happen is prepared, quality-control checked, reworked, and finalized. Included are input documents and data formats, processing specifications, output record formats and documents, and functional specifications for the program to be used in computer processing or initial definition of the manual processing required for a manual system.

This phase has a special purpose: it requires end products which can be reviewed one more time by corrections managers and information users before the expensive procedures of programming and implementing an information system take place.

OBSCIS WORK PLAN
TECHNICAL SYSTEMS DESIGN PHASE

ACTIVITY
  TASK
    SUBTASK   **CONSIDERATIONS**

I.
  Complete System Specifications

  1. Lay out the format of output information.

    1. Depict each required report layout in terms of exact data location in the report, data content, sequence of data, controls, totals, and page separation.

    2. Depict each required screen or terminal printer format for on-line information inquiry and display in terms of exact data position, content, and sequence.

    3. Depict microfilm output in a manner similar to a printed report.

  2. Define input documents and related media to be used to collect data.

    1. List any present input documents which will be used to collect data.

    2. Lay out or redesign the elements of new input documents.

    3. Determine source and frequency of collection of input data.

    4. Determine the media that the input data will be translated into (i.e., ledger cards, punched cards, online

- The subtasks defined under this task actually depend on the type of system being implemented. However, content of the output is the main concern, rather than the mode of delivering it.

- A specific output of this task would be a description of the output reports. This would include the frequency of producing the reports and what the distribution flow of the reports would be. Output other than printed documents, such as machine readable or visual display, are also considered.

- The volume of data, lines, and pages, as well as the frequency associated with each output, should also be considered. These factors will have an impact on the resources required to produce it.

- The subtasks required are actually determined by the level of implementation chosen for each application. That is, the amount of change required to each input document or source is actually determined by the CIS chosen.

- The specific output of this task is a set of input documents presently used by the corrections organization, and/or additional revised ones designed in this task that will be used to collect input data elements.

- The input data will be depicted in the format of

ACTIVITY
   TASK
      SUBTASK

CONSIDERATIONS

terminal input, etc.).	the media chosen to enter it into the system, such as punched card layout.
5. Separate the input into logical transactions.	• The sequence of the data collected in logical transactions should be relatively consistent with the source document and data available at the same point in time in the corrections process.
	• Estimate the volume of transactions in order to aid in determining the amount of resources required to process the inputs.
3. Diagram the basic flow of data.	• This task involves defining how data moves from its original source to the processing function and what happens when it gets there, including how it is edited or corrected if in error.
1. Identify original source of data.	
2. List data collection points.	
3. Identify input preparation and contents required.	• A specific output of this task is a chart of the flow of data.
4. Describe the general editing and error correction process.	• The purpose of this task is to supply a communication tool to aid users and the technical staff in understanding each other in relation to how the input data are to be handled.
4. Design and determine the contents of the data base or files required in the system.	• The data base is composed of the data elements required for each application of the CIS. In addition, computer run to run files are used to pass data between processing points within the system. This is true also in manual systems where data may be copied from a source document to an intermediate document (i.e., file) before final tabulation. For example, data elements relating to the assessment application may be kept on a master data base, whereas daily transactions may be kept on an interim file to be passed between an update function and a reporting function.
1. Define the data elements.	
2. Collect the elements into logical records.	
3. Prepare a layout of each file.	• Each file is made up of a number of data elements. The characteristics of these data elements must be defined. For instance, is the element numeric or alphanumeric? What is its maximum size? Does it have any initial value? What is the basic logical description of the data elements? What are the security, privacy, or policy considerations on this element? Does it have multiple occurrences like changes in status or is it a static element gathered once as input?

ACTIVITY
   TASK
      SUBTASK

CONSIDERATIONS

	• Some additional file characteristics to be determined would be the media used, total number of records on the file, the file sequence, the record size, and the number of records to a physical block of data.
	• File activities should also be described. For example, the update interval, the average number of transactions per day, security, backup, retention schedule, and control and update procedure.
	• Identify the logical structure and connective relationship between the various data elements and groups of data elements in the file. For example, the file should perhaps be structured so that several incarcerations can be linked to a single offender.
	• Define the volume of data required in the system to determine the required file space.
5. Produce a computer processing chart.	• This task is essentially the collection of processing tasks to be performed in logical groupings called programs.
1. Describe the sequence of major processing functions, files used, inputs required, and outputs produced.	• Although computer processing is implied in this particular phase, the same tasks would be required if the system were entirely manual. File descriptions could pertain to manual files. Major processing functions could also pertain to an entirely manual process.
2. Assign program and file descriptions.	• A specific output of this task would be a pictorial description of files and major processing functions in flow chart form. For example, a major processing function could be the entry and updating to the data base of new offenders processed in the reception function.
6. Develop program function sheets.	
1. Describe the general purpose of each computer program or manual processing step and the functions which must be performed within that program.	• This task is performed by a systems analyst. It is designed to identify, in general terms, what the program must do. It is not a detailed program specification; but is used to determine the amount of effort required to do detailed program specifications and programs.
2. Describe the logical decisions necessary for the computer programs to perform these necessary functions.	

ACTIVITY
    TASK
        SUBTASK

CONSIDERATIONS

- Under the prior task of this activity, a computer process chart was generated. The boxes of that chart designated as programs are now detailed in this task to indicate what those programs must do.

- In a manual system this would be a general outline of the manual processing required at each point. The detailed development of manual processing procedures would be done later.

II.   *Establish Final Requirements For Processing Resources.*

    1. Based upon input, output, and processing volumes determine the number of personnel required to operate the CIS.

    2. Define the need for required computer, communications, unit record equipment, files, and other business machines.

    3. Based upon needs, define the operating specifications for the required equipment.

    4. Contact vendors and request bids, if required.

- At this point, the information gathered during the technical design can be used to define the need for and specifications for required hardware.

- Available hardware/software resources defined earlier in the project should be reviewed to determine what additional capabilities will be required.

- Specific kinds of software, such as that required to handle any on-line teleprocessing features of a state's CIS, should be defined at this time.

- Technical personnel will be required for this task.

- A specific output of this activity could be a request for bids from different vendors, based on the specifications defined.

III.   *Refine Work Plan And Schedule For The Final Phase Of The Project*

    1. Refine tasks to be performed.

    2. Refine skill levels required.

    3. Refine schedule of personnel.

    4. Finalize commitment of technical support.

- As in the end of every other major phase, correctional administrators must review the next phase. Although preliminary plans have previously been made, these can be outlined in greater detail now that administrators are more aware of the exact requirements of the new state CIS.

ACTIVITY
    TASK
        SUBTASK

CONSIDERATIONS

- The tasks required are outlined in the next phase of this work plan. The specific output of this activity would be a refined list of tasks to be performed, with personnel assigned to perform those tasks and deadline dates established when the tasks are to be completed. Typically, a programming staff would be involved in the next phase, and plans for the acquisition of these resources are required.

IV.   *Establish Final Estimates Of The One-Time And Continuing Costs Of The New System*

    1. Identify one-time and continuing manpower costs.

      1. Review the costs of required skill levels.

      2. Review the cost of additional resources required because of time constraints and/or levels of effort required.

      3. Finalize the cost of programming and other technical development support.

    2. Finalize additional or replacement hardware costs.

      1. Finalize the cost of required computer facilities.

      2. Finalize the cost of required communication equipment.

      3. Finalize the cost of unit record equipment.

V.   *Perform Management Review Prior To Final Phase*

    1. Obtain buy-off of corrections management.

    2. Obtain buy-off of operations management.

    3. Obtain buy-off of final users of the new CIS.

- Correctional administrators are making their final review of the cost of developing the new state CIS prior to beginning the systems development and implementation phase.

- The work plan and schedule developed in the previous activity is used to determine what the manpower costs will be.

- A specific output of this task is a list of costs which can be reviewed against prior estimates to test for reasonableness.

- If the cost is substantially over the original estimate, systems development should not begin until the reason is determined and corrective or alternative action is taken.

- As in determining the cost of manpower resources, correctional administrators should review the final estimate of the costs of additional hardware facilities to support the new state CIS.

- Final estimated costs of development are then assembled in preparation for a final management review.

- This activity is the final review of the proposed system prior to the procuring of any manpower or equipment resources and the actual implementation of the new CIS.

ACTIVITY
    TASK
        SUBTASK

CONSIDERATIONS

VI. *Procure Additional Resources As Required*

   1. Procure technical/programming staff.

   2. Order equipment.

- This is the final activity to be performed before systems implementation begins.

CHAPTER 6. ACHIEVING OPERATIONAL STATUS

This phase begins with detailing of program specifications and writing of the programs and other necessary technical documents. It ends with an in-place, operational system which is evaluated and set on a course of information-processing continuity.

The implementation process contains extensive checkpoints. Users are trained prior to conversion to the new system. They, in effect, bring the new system to life. All elements or parts of the new system are tested individually, and then as full entity. Conversion and start-up strategies and plans are developed. A step-by-step phased implementation procedure is recommended to provide user and operating personnel with the necessary amount of learning and initial operation time.

Following conversion to the new procedures, an in-depth review is conducted to evaluate how well the system has met its initial objectives and how well it is meeting management and user needs. Since each OBSCIS system is modular and open ended, it is possible at this time to establish objectives and plans for enhancement and/or addition of new applications.

Thus, the implementation of an OBSCIS system marks the introduction of a continuity of increasing information processing capability. A first round of objectives has been implemented. The future is open to enlargement of horizons in any way correctional managers care to stretch their imaginations.

OBSCIS WORK PLAN
ACHIEVING OPERATIONAL STATUS PHASE

ACTIVITY
    TASK
        SUBTASK

CONSIDERATIONS

I. *Develop Programming Specifications*

   1. Document the requirements of each computer program.

      1. Review and finalize the definition of the program functions.

      2. Describe the logic of the program to the level required to communicate the processing requirements.

      3. Identify all inputs and required outputs.

   2. Establish final definition of all files.

      1. Review and finalize specifications of master files.

      2. Review and finalize specifications of

- The project team now becomes, at least in part, managers of the programming effort. This first activity is the definition of the program specifications for the new programming staff, which will add to the project.

- In the case of a manual system, the definition of the processing required must be made as the first step in developing the required manual procedures.

- Included in this step are the special programs required to convert from existing systems to initiate the new system.

- Also included is any special program required to provide system backup.

- As with Task 1, this is the final review of the specifications of the files to be used within the system to store the required data and produce the defined result.

inter-run files.

- Additional files could be defined in this task to support system operation for processing efficiency or other purposes.

- Definition of all coding structures for all data elements should be complete at this time. For example, eye color codes should all be established and agreed upon.

3. Establish all programming and operations standards.

   1. Develop standard modules to be used in several programs.

   2. Identify standard control methods to be used in each program and file.

   3. Prepare standard programming conventions and identify programming languages to be used.

   4. Establish standard output specifications.

   5. Establish standard code table reference file.

   6. Create list of standard operating messages.

   7. Establish program documentation and testing standards.

- This task is an extremely important one. It can significantly reduce the overall programming effort through use of standard methods of performing the programming taks.

- The use of modular programming should be encouraged, particularly for an on-line system.

4. Review and confirm programming schedule and budget.

   1. Establish a logical sequence of programming to assure ease in testing.

   2. Estimate the amount of programming effort and related costs for each program.

   3. Schedule programming assignments with available or contracted personnel.

   4. Review and refine this schedule and budget with the programming organization.

- This is the establishment of programming management control whereby schedules and certain amounts of funds are allocated to the programming effort. The amounts allocated should be agreed upon by corrections administrators and the programming organization. These schedules and amounts will be used to monitor the progress of the programming effort.

- The programming effort should be estimated for coding, clean compiling, testing, and documenting.

- Consideration should be given to the elapsed time of the programming effort caused by the availability of program punching, compiling, and testing resources.

II. *Perform Programming*

   1. Code programs.
      1. Write Code.
      2. Compile program.
      3. Revise and recompile as required.

   2. Unit test programs.
      1. Create test data.
      2. Run the program test.
      3. Review restults, recompile, and retest as required.

   3. Prepare programming documentation.
      1. Prepare program logic documentation.
      2. Prepare program operating documentation.

III. *Plan For User Training*

   1. Identify the personnel who must be trained.

   2. Identify which training materials must be developed.

   3. Determine how many levels of training materials must be developed.

   4. Determine the logical sequence and schedule of the training that must be performed.

- This activity is the generation of the programs. It is performed by the programming staff.

- The specific output of this task would be the completed programs, ready for testing.

- Test data here are intended to assure that each program performs the functions outlined in program specifications. No systems test is implied here.

- The same staff that actually performs the coding of the programs can perform this function.

- Special utility programs to create the files needed for testing may be required.

- The sequence of completion of programming can significantly affect the ease of testing.

- The final output of the programming activity is to document the programs. This includes:
  — Program logic documentation, which is used during the ongoing maintenance process to make changes.

  — Operating instructions, which are used by the operations function to execute the programs.

- This documentation is required because people who will perform the ongoing maintenance of the system are not necessarily those who developed it.

- Documentation is also valuable in locating logic problems. It also reduces dependence upon the personnel who wrote the original programs.

- The purpose of this task is to identify all the training materials that must be developed. This can include managerial training on how to use the outputs of the system, clerical training on how to prepare input, and training on how to code or correct erroneous data.

- In addition, computer or terminal operation guides may have to be developed.

- In a large training effort, it is desirable that some users be involved in actually performing the training.

OBSCIS WORK PLAN
ACHIEVING OPERATIONAL STATUS PHASE

ACTIVITY
   TASK
      SUBTASK   CONSIDERATIONS

IV. *Complete Necessary User Training*

  1. Write detailed procedures for user departments.

    1. Write procedures for manual data flow.

    2. Write procedures for document completion instructions.

    3. Write operating procedures for all equipment if required.

    4. Write error correction and control procedures.

    5. Develop security and backup procedures.

    6. Develop alternate processing procedures to be used in case of system failures.

  2. Conduct management-level sessions to explain responsibility of user departments.

    1. Explain responsibilities for input preparations.

    2. Explain responsibilities for output disposition.

    3. Explain responsibilities relative to the processing cycle.

  3. Conduct training sessions.

    1. Hold classes for supervisory user personnel.

    2. Assist in classes for user clerical staff.

V. *Plan The System Test*

  1. Determine test procedures.

  2. Define system test data to be used.

  3. Schedule required resources, including equipment, personnel, and other support resources.

- The purpose of this activity is to equip all the using and operating departments for the operation of the new system. It is highly desirable for the user department to perform as many of the preparation tasks as possible. By means of this involvement, the user may begin to accept the system and obtain a thorough working knowledge of its details.

- These procedures should be written in a nontechnical play script form that defines the necessary steps, frequency, and responsibility associated with each manual or operating function.

- This is the formal assignment of responsibilities to different agencies involved with the state CIS. A realignment of the organization is not intended here. Rather, it is the specific understanding of who will be responsible for what. Typically, the first subtask involves collection of input data in the field. Subtasks two and three involve the actual processing function.

- The project team must train the user department in how to operate and run the system. However, they should limit their instructions to supervisory personnel and then have the supervisory personnel instruct the actual clerical personnel who will assemble the data. In this way, supervisory personnel become more involved with the system.

- The entire user training process can be performed in conjunction with the programming effort.

- This activity is necessary to plan the test of the entire system upon completion of the entire system including the programming test.

- This system test should not only include a test of all mechanized procedures, but also the manual portions of the system.

- Commitment will be necessary to obtain enough user and technical support to perform the system test.

OBSCIS WORK PLAN
ACHIEVING OPERATIONAL STATUS PHASE

ACTIVITY
   TASK
      SUBTASK   CONSIDERATIONS

- Sufficient time must be planned to allow several iterations through the execution of the system. This will allow for corrections to be made. If the system is relatively large, it may be tested in phases.

VI. *Conduct System Test*

  1. Prepare system test data.

    1. Assemble historical input, if applicable.

    2. Generate inputs to include transactions which make the system fail.

  2. Predict output of system test based on test data.

    1. Determine content of output reports.

    2. Determine what the system should do based on erroneous input data.

    3. Determine results of processing on the files.

  3. Run system test and produce output.

  4. Review results, generate discrepancies, rerun as required, and obtain final acceptance by all users.

- During the programming phase, programmers tested each program on a unit test basis. The purpose of the system test is to connect all programs together to see if the system will function as an entity.

- Historical data may be used if it is of the same nature as the new system requires. However, a larger level of control will be required if historical data is used so as to be able to predict results.

- Making the system fail relates to generating input data which is not expected by the system to determine if it will fail, or how it will handle the erroneous input. Most system tests include only valid input. Systems are not tested for the inevitable rash of unusual conditions during system startup.

- The project team must determine, before running the system, what is expected based on the input data. This will considerably ease the effort in checking out the test results.

- Establishment of a discrepancy log and follow-up process to resolve problems in the test is an important tool in assuring that all detected problems are corrected.

- This task will be done more than once, since discrepancies will be generated each time the system is run. These discrepancies must be turned over to the programming function for correction.

- This step should be done jointly by the technical and user staff. Some minor problems can be prioritized for later correction after system startup.

ACTIVITY
  TASK
    SUBTASK

CONSIDERATIONS

VII. *Plan For System Conversion And Implementation*

1. Identify steps involved in converting existing data to the new system.

2. Identify steps necessary to start up the system.

3. Identify controls or verification required during the conversion and startup function.

4. Determine whether parallel processing will be required or is feasible.

5. Determine necessary resources, including machines and manpower required.

6. Establish schedules and responsibilities for conversion and implementation activities.

- Although conversion programs were defined, a plan on when and how to use them must be developed.

- Decisions must be made as to whether historical data will be initially converted or ignored.

- Special amounts of effort may be required for a one-time conversion process.

- Parallel processing may not be feasible if the CIS is radically different from current systems.

- If parallel processing is to be done, the new system should be used for the live operation.

- A pilot operation may be required to test alternatives before final conversion.

- Only files required to support the initial implementation must be converted. That is, if the system developed is being implemented in phases, all existing files may not be converted.

VIII. *Perform The System Conversion*

1. Correct existing or historical data into new system.

  1. Convert present files to new files.

  2. Create new files.

  3. Review controls to assure no data were lost or distorted during conversion.

2. Run parallel processing for portions of the new system which replace the old system.

  1. Run new and old system for same processing cycle.

  2. Compare output to assure same results.

  3. Perform forms and procedure changeover.

- This task involves taking existing files and converting them into the new format. If new files are created, this is the actual creation of those files. Controls refer to the assurance that no data were lost during the conversion.

- A specific output of this task would be files ready for use by the new system.

- This task is required if portions of the old system are incorporated in the new system.

- In order to assure that the old processing function incorporated in the new system is the same, both systems are run simultaneously and the output is compared.

- It is easier sometimes to dual process data on a historical basis, since the expected results are shown prior to the parallel.

- This is the task of replacing old forms and procedures with new ones.

ACTIVITY
  TASK
    SUBTASK

CONSIDERATIONS

IX. *Perform Final Implementation*

1. Install new system and operate in a production environment.

  1. Establish library of production programs.

  2. Establish library of data files.

  3. Turn over operating documentation, processing schedule, and data retention schedules.

2. Provide support to operations during final implementation.

  1. Assist in solving operational problems.

  2. Correct programming errors.

3. Assume ongoing maintenance mode

- After the system has been programmed, users have been trained, and a systems test conversion and parallel processing have been conducted, the system is ready for turnover to personnel who will operate it.

- Insure that a discrepancy reporting and follow-up process are initiated.

- This is the startup of the new system and should be run entirely by the operations staff.

- Prompt response to the inevitable problems not found during system test will establish credibility in the user organization.

X. *Perform Final Review*

1. Review all documentation.

2. Review resulting system and operation with that originally proposed to assure that all goals were met.

3. Review final schedule and development cost variances for future use.

4. Identify additional modifications required.

5. Establish a plan for the ongoing maintenance of the system.

- This activity provides an opportune time to reflect on lessons learned for the future.

- Also, problem areas documented at this time would be helpful for other states which have yet to implement their own CIS.

XI. *Initiate new projects using future project list*

1. Reiterate process beginning with activity under State Self-Analysis.

- If the system is being implemented in phases because of certain constraints, a reiteration of the process can be used to implement remaining portions.

END